

S/N 10/731,882

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	James P. Rohl et al.	Examiner: Phong Nguyen
Serial No.:	10/731,882	Group Art Unit: 3724
Filed:	December 9, 2003	Docket: 279.630US1
Customer No.	45458	Confirmation No.: 6739
Title:	APPARATUS AND METHOD FOR CUTTING ELECTRODE FOIL LAYERS	

PRE-APPEAL BRIEF REQUEST FOR REVIEW

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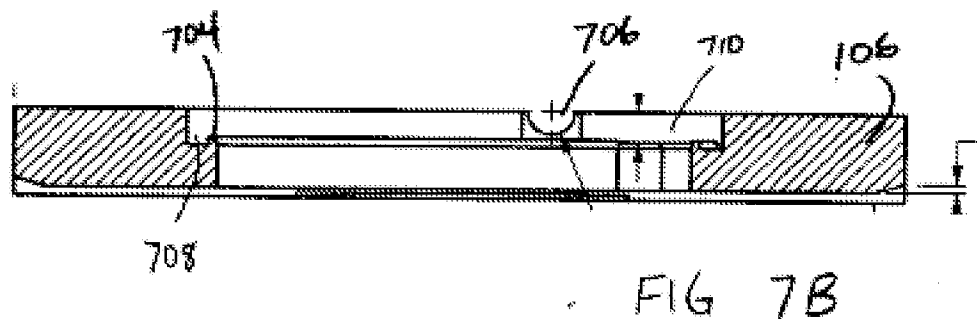
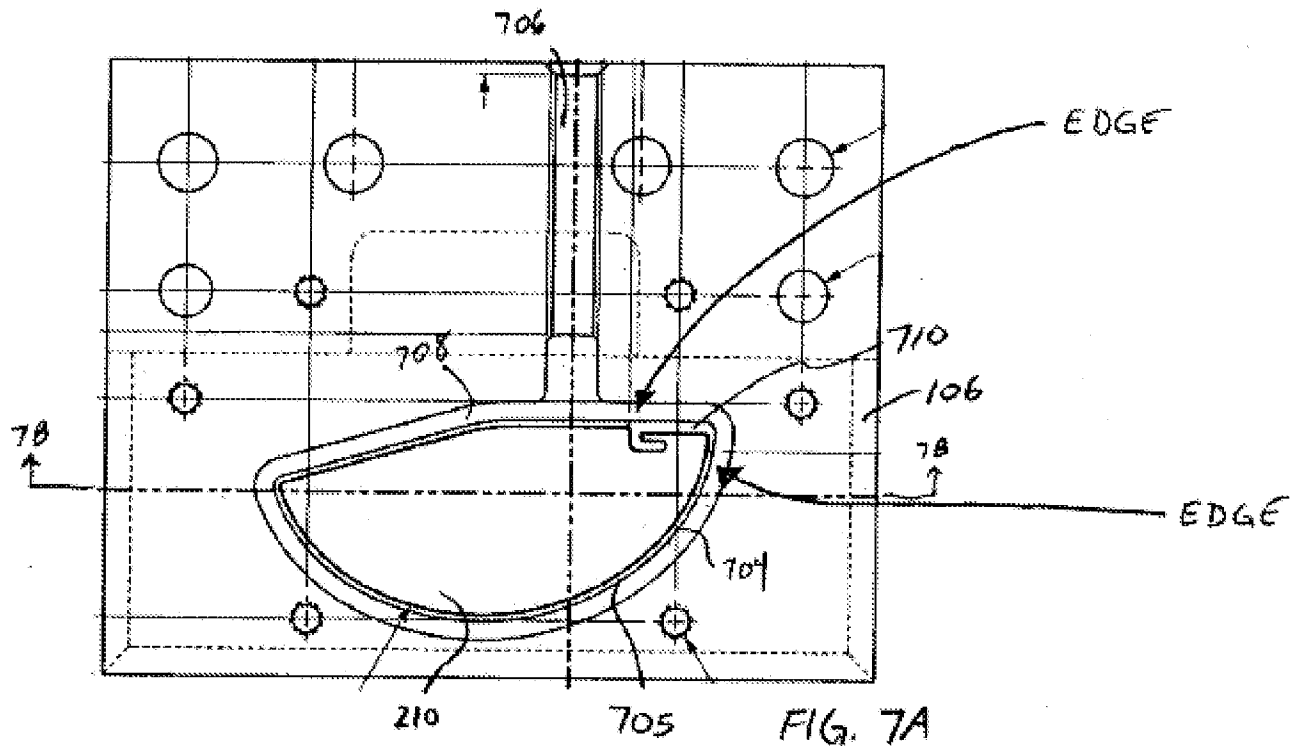
Applicants request review of the final rejection in the above-identified application in the Final Office Action mailed March 16, 2010 and the Advisory Action mailed June 1, 2010. No amendments are being filed with this request. This request is being filed with a Notice of Appeal. The review is requested for the reasons stated below:

Drawing Objections and Rejection of Claims Under § 112

Claims 10-12 and 64-66 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner stated that “the limitation of “the ridge including an opening to the interior of the die hole” in claims 10 and 65 must be shown or the feature(s) canceled from the claim(s).” (Page 2 of Final Office Action). The Examiner further stated “that element 705 represented a ridge does not have any discontinuous section to be called “an opening.””

Applicant traverses with the objection to the drawings and the rejection under 35 U.S.C. 112, second paragraph. Figures 7A and 7B of the application are reproduced below for reference.



As can be seen in Figures 7A and 7B, die hole 210 is surrounded by a lubrication dam 704, which is defined by a ridge 705. A feed conduit 706 feeds lubricant to a lubrication reservoir area 708. A pre-selected area 710 is open (i.e. ridge 705 does not extend through area

710) such that lubrication delivered via conduit 706 is directed towards hole 210 only through opening 710, while the ridge 705 holds the lubrication back around the rest of the periphery.

For reference, in Figure 7A Applicant has pointed out the end edges of the ridge 705 that define opening 710, which is located between the end edges of the ridge 705. In Figure 7B, the opening 710 is located at the upper surface of the hook-shaped die portion where the lubricant is to be delivered. Although this hook-shaped die portion may be slightly higher than the floor of area 708 it is lower than the ridge 705 extending around the rest of the periphery of the die hole. Since location 710 is lower than the ridge 705, lubricant is allowed to flow towards the die hole 210 and onto the surface of the hook-shaped portion, as explained in the specification and shown in the Figures.

Accordingly, the subject matter of “the ridge including an opening to the interior of the die hole” in claims 10 and 65 is present in the specification and shown in the figures; and element 705 representing a ridge does have an opening 710, which is open to die hole 210.

In the Advisory Action, the Examiner states that “In the pre-selected area 710, the ridge 705 still exists but does not discontinue as asserted by the applicant and is best seen in the right side of Fig. 7B. If there is a discontinuity on the ridge 705, the lubricant flows into the die hole which is not desirable for a punching process.”

Applicant traverses these statements. Again, Figure 7B shows that the location 710 is slightly higher than the floor of area 708 and is lower than the ridge 705 extending around the rest of the periphery of the die hole. Ridge 705 does not extend through opening 710. Instead, lubricant is allowed to flow through that area to the die hole.

Moreover, in contrast to the Examiner’s assertion that “[i]f there is a discontinuity on the ridge 705, the lubricant flows into the die hole which is not desirable for a punching process,” Applicant submits that the purpose of the discontinuity 710 is to allow the lubricant to flow towards the die hole at that point. As discussed in the application: “A pre-selected area 710 is open (i.e. ridge 705 does not extend through area 710) such that lubrication delivered via conduit 706 is directed towards hole 210 only through opening 710, while dam 704 holds the lubrication back around the rest of the periphery.” (Page 7, lines 15-18). Figs. 7A and 7B clearly show the discontinuity of the ridge 705 at the edge points described above, thereby defining location 710.

The application also explains: “In use, as a foil is cut between punch 118 and die 106, lubricant is directed to the predetermined location 710. In one embodiment, this pre-determined

location is lubricated because the material being cut is a dual material, for example, an aluminum anode layer having a brittle 70% Al₂O₃ section and a pure aluminum section.

Referring to Figure 7C, in one example an aluminum sheet 712 can have a thickness of about 100 micrometers (0.004 inches). Other embodiments can have sheets having thicknesses ranging between 50 micrometers and 600 micrometers. Sheet 12 can include an aluminum oxide portion 714 and an aluminum portion 716. The lubricant is concentrated on the periphery of the die hole at the location 710 where the punch cuts through the aluminum portion. Soft materials such as aluminum tend to gall and stick to the punch tip or the guide inner diameter. Use of a lubricant will increase the life of the punch and die.” (Page 7, line 26 – page 8, line 10).

Accordingly, as explained by the application, lubricant is directed, through the use of predetermined location 710, to that section of the die hole to allow the lubricant to be concentrated there.

The Rejection of Claims Under § 103

Claims 10, 12, 64 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Tsubota (U.S. Patent No. 5,361,660) in view of Lyon (U.S. Patent No. 2,821,156).

Applicant traverses the rejections for the reasons given in the response to the Final Office Action.

Claims 11 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsubota in view of Lyon as applied to claims 10 and 65 above, and further in view of Klint et al. (U.S. Patent No. 3,288,715; hereinafter “Klint”).

Applicant traverses the rejections for the reasons given in the response to the Final Office Action.

Claim 57 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsubota in view of Lyon as applied to claim 10 above, and further in view of 3M.

Applicant traverses the rejections for the reasons given in the response to the Final Office Action.

CONCLUSION


Applicants respectfully submit that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone the undersigned at (612) 359-3267 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date July 15, 2010

By 
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 15th day of July, 2010.

Nellie Nuhring

Name


Signature